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Attitude of commissions
and other regulatory...

[S.I.]

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**ATTITUDE OF COMMISSIONS
AND
OTHER REGULATORY BODIES**

PAPER READ NOVEMBER 23, 1920

BY

F. C. HAMILTON,

AT THE

EXECUTIVE CONFERENCE

OF

THE DOHERTY ORGANIZATION

There are four general divisions of regulatory bodies—city councils, public utility commissions, state courts and federal courts.

The attitude of these bodies is, of course, their reaction to the forces brought to bear on them, of which the four which follow have probably had the greatest effect.

1. The tendency of any buyer to make the best possible bargain.
2. Lack of understanding of the industry's past profits.
3. Struggle of newspapers for circulation.
4. Method by which members of the bodies are selected.

(1a) Even the law places on the buyer the responsibility of driving the best possible bargain and in so far as the city council not only represents the public who uses your service but also are themselves customers, they are supposed to act in a judicial capacity in deciding contests which vitally affect their own interests.

For this reason, if for no other, the determination of these various courts and commissions approach justice in the order in which I have named them—city councils, public utility commissions, state courts and federal courts.

(2a) In addition to the tinge which the more or less close relations between buyers and regulatory bodies may give decisions, decisions are farther affected by the fact that there was a period in the utility history during which the utilities did make real profits. These real profits came because for many years after the establishment of the early properties there was a steady decline in prices, as this chart shows, which decline carried the operating expenses below the point at which they stood at the time the various franchises for service were granted. During this same period there was a very decided increase in efficiency of equipment, which again increased the profits by lowering the operating expenses through a period when rates stood still under franchise agreements.

On the part of the public there is a lack of understanding of the conditions that brought about these profits, and generally the public credits them to the issuance of securities in excess of either the value or cost of the property.

(3a) There is another reason why the public has the feeling that utility properties are still unduly profitable. It is the psychological reason back of the success of the Hearst and Scripps-McRay syndicates. It is a psychological fact which is taken advantage of to a greater or lesser degree by all other papers and that is the fact that the ordinary man who is not successful does not want to be told of his lack of success. He wants to be sympathized with, and if you will analyze the editorial policy of the so-called yellow journals you will find they are constantly sympathizing with the poor downtrodden public.

Sympathy is the best circulation producer that the newspapers have ever discovered, and to sympathize with the public there must be something to sympathize about. From a circulation standpoint it is, of course, easy and safe to sympathize with them on the onerous burdens placed on them by the public utility companies because the public utility companies, being pacifists, do not fight back and the circulation of a particular paper is affected favorably only by offending public utilities. The cumulative effect of this clamor which has been carried on for years

is just another angle that warps the judgment of the public and affects the decisions of those regulatory bodies which are closely related and quickly responsible to the public.

(4a) The city councils are elected because those individuals are popular with a greater number of people than their opponents who failed of election, and it is only reasonable to expect that they are going to do those things which the greatest number of the people want done, even though that policy at some future date, during the administration of some succeeding city council, may be shown to have been the wrong policy and in reality a detriment to the public. They are usually imbued with the same ideas as the remainder of the general public, influenced by the same press and their judgment tinged with the fact that they themselves are customers. There are exceptional cases, of course, but the success which we may have with a particular city council cannot be depended upon as a basis for continued revenue.

Galveston not long ago had a city council composed of some of the leading business men in town, who not only wanted to do the fair thing but had the business education and experience by which they could reasonably determine what was the fair thing. Our rates now effective were granted by that city council. At the next election, however, the public removed all of them from office and elected a council which for all practical purposes was pledged to a soviet government of the city. The new city council cut every public utility rate without a real hearing, and we were obliged to take the rates of the Brush Electric Company to the Federal Court, where, upon the full and complete hearing, valuations being presented by both the Company and the city, the new ordinances passed by the new city council were permanently enjoined and the rates which the previous city council had granted us were sustained.

An understanding of some of these general conditions is necessary to determine why our hopes of success in getting reasonable rates lie at the top rather than the bottom of the judicial system.

PUBLIC UTILITY COMMISSIONS

In regard to the state commissions, it is necessary in analyzing their attitude to consider for a few minutes their origin. As I pointed out in the beginning of this talk the original public utility companies had secured franchises which contained rates based on the costs of operation as of the date the franchise was granted. As the index of prices went down and the efficiency of equipment went up, many of these properties became very profitable. The franchises when contested were declared by the courts to be legal and binding contracts. It was then that some ingenious gentleman found that if legislative powers were delegated to a public utility commission, these franchises which had been upheld by the judicial arm of the government could be set aside. It is worthy of note that utility commissions were formed with no other purpose than to do away with these otherwise binding contracts and allow commissions to reduce rates which had been declared by the courts to be legal and binding.

The early history of every commission is a practically unbroken record of rate reductions. The commissions were popular with the general public in direct proportion as they did reduce rates and were,

therefore, extremely prompt, ingenious and aggressive in their hearings and the methods which they pursued.

But there followed another period in which commodity prices increased rapidly and soon it was the companies rather than the cities who were bringing rate cases before the commissions. The commission perforce granted increased rates, not nearly so large as to yield the so-called fair return, and not nearly so promptly as they had previously granted rate reductions. When the companies protested against the inadequacy of the increases, they were told they could not be reheard until they should try out the new rates and thus prove they would not yield a fair return. You cannot in your mind picture the commission, during the previous period, telling the public to postpone reductions on a chance that operating expenses might go up and as a result the rates yield only a fair return. Instead of that they had taken prompt and aggressive action bringing rates down, but when giving increases they repeatedly insisted we try rates which were so obviously inadequate as to make a trial unnecessary to the determination of their inadequacy.

In spite of the meager increases which were granted, however, there began at once an agitation to do away with the public utility commissions. Here again was a lovely chance for all of the newspapers to sympathize with the general public, which they proceeded to do with thousands of columns, referring to the commissions as "rate-hiking courts", "corporation commissions" and running the whole gamut of nasty insinuations as to the reasons for obviously necessary increases.

The public, the "boss", threatened to fire the commissions, their employees, for having raised rates. When any man's superior officer tries to disconnect him from the payroll because of some particular action he has taken, he usually endeavors in the future, so far as he can, to avoid repeating that offensive action, unless refraining should run counter to his scruples whereupon he would resign. Up to date, however, I have never heard of a politician resigning because his "boss", the public, wanted him to do something against his principles.

It is only reasonable, therefore, to assume that against this pressure no adequate increases have been granted, irrespective of the basis on which those increases were determined. I am not blaming the commissions for their attitude. It is the net result of the precedents established by their predecessors, the manner in which they obtained their offices and the desire for approbation which to a greater or lesser degree affects every one of us.

But because we are familiar with the reasons for their actions, we certainly must not passively assume that a commission decision is final when it obviously must lack something of complete justice.

STATE COURTS

State courts have been a little more favorable to the utilities than have the commissions and a little less favorable than the federal courts for perfectly obvious reasons. As compared with the commissions, they are composed of men who have been trained to more closely analyze questions presented to them. While they occupy elective offices, they are a little more secure in their tenure of office in that, unlike the commissions, the office can not be abolished even if the holder is

changed, and they are more sensitive about having their decisions reversed by superior courts.

FEDERAL COURTS

Federal courts have been throughout their entire history the bulwark of the Constitution. Because of the fact that they are appointed for life they are not as sensitive to fluctuations in public opinion. They are trained lawyers, and the care with which they have been selected insures a degree of clear thinking that could not be reasonably expected in the average of a lower court. Their positions are those of great responsibility and responsibility almost always brings conservatism.

In consideration of public utility matters they have followed the same paths of reason and justice that they take in consideration of other questions and in so far as lay within their authority they have made fair determinations.

The subject of this talk was assigned to me and so far I have followed the outline that was given to me.

I now want to assign myself a subject and let you judge of the relative importance of the two. *My subject is the attitude of the public utility men.*

There are in the United States approximately 12,000 electric, gas and street railway plants representing a total investment of approximately fifteen billion dollars. There are in the United States about 399 automobile plants with a total investment of \$1,800,000,000.

Stop and think for one minute of the comparative return received by the average dollar invested in these two industries. I think that you will all agree with me that the public utility business for the last ten years has not been a particularly attractive proposition in which to invest money from the standpoint of return. When I say that, I am referring to the total of all money invested in the business as a whole; all classes of utility service; good, bad and indifferent operation, and all communities. I have heard advanced as a reason for this situation the attitude of the public, the attitude of the regulatory bodies and many other things. Are they reasons or alibi?

If somebody were to tell me that as a whole all of the grocery stores in the United States were a poor investment and attempt to attribute that lack of success to the attitude of the public, to the attitude of the courts or to any other reason outside of the organization of the grocery business, I should say that they were endeavoring to establish an alibi for not doing those things which might reasonably be expected of them.

I am not now nor have I ever been convinced of the fact that there was anything seriously the matter with the public utility business which could not be corrected from within the public utility business. For the purpose of analyzing that conclusion stop and think of this for a minute. Early in 1918 there was a proposal made by some of the highest officers of the National Electric Light Association that they suspend all of the activities of the Association for the period of the war on the basis of economy. Picture to yourself for one minute the situation of 6541 companies, which involved an investment in excess of five billion dollars, ceasing to have one central body represent them

in matters of general interest during the period of the war because of the expense which for all of these companies amounted to \$400,000.

To his everlasting credit, Mr. M. R. Bump made a strenuous and successful fight against that policy. If ever there was a time in the history of the electric light and power industry when they needed a strong central association, amply financed and aggressively conducted, it was during the period of the war and immediately thereafter.

Various electric light companies carry fire insurance, the premiums on which probably run about ten times the amount annually which they pay as dues to the National Electric Light Association. The activities of the Association could certainly be considered as an insurance against the reduction of rates below an amount which would yield a fair return. Fire insurance protects the principal of an investment from only one hazard but the principal is practically worthless unless that investment has an earning capacity. The fact that the electric companies pay so little as they do toward the maintenance of the National Electric Light Association is prima facie evidence to me of the fact that they are absolutely lacking in the fighting spirit necessary to protect their earnings, or that they lack an appreciation of the necessity of collective action.

I believe that it is a reasonable assumption that if there were 12,000 companies engaged in the steel business, representing a total investment of fifteen billion dollars, we could reasonably expect to find an association of the steel companies represented by such lawyers as Ex-Justice Hughes, Elihu Root or men of like caliber, who would be retained on an annual basis for the protection of the general interests of the industry. The fact that we do not find any such activity on the part of the national electric light, gas or street railway association is an evidence, to me, that the men in the public utility business do not fight sufficiently for their rights.

I think if it were possible to compile the total salaries paid to the business agents of the labor unions and the cost of the executive officers of their central associations, you would find an amount annually devoted to the interest of their associations that would put to shame the four associations of the public utilities. The attempts of the unions to get their members an adequate revenue have been, as you know, attended with considerable success. The percentage of increase secured by labor unions has certainly been out of line with the increases in the rates paid the public utilities for the service which they have rendered to the public.

There are only two reasonable assumptions on which to base the fact that the labor unions are more successful than are the public utilities in obtaining rate increases.

First: The assumption that the laws of the United States are so unfairly administered as to give the labor unions an insurmountable advantage over the public utility companies, and

Second: The assumption that the public utility companies have failed in securing an adequate revenue due to the fact that they have not the adequate persistency or nerve to prosecute their claims for just return for their service.

Take the artificial gas business, for instance. It is a fairly safe

assumption that where ninety per cent. of the gas companies are failures, ninety per cent. of the electric plants are partial successes.

The gas plants were established at a much earlier period than the electric plants and had the resulting advantage of being first and longest on the scene of action. If you were to send a solicitor down a street in any city in the United States with the authority to tell each customer of the electric and gas plants that he had the choice of either one of the services but could not have both, the majority of those customers would choose the gas service, so that from the standpoint of desirability the gas company has an unusual advantage over its competitor, the electric light company.

From the standpoint of the number of customers which these two utilities will respectively have in a given community, it is a matter of record that on the average there are ten per cent. more gas consumers in a town than there are electric light consumers. We have therefore, the remarkable spectacle of the utility—gas—which was the first on the scene of action, which is the most desirable from the standpoint of the customer, and which has the most customers being the least profitable.

Such a situation as this would naturally presuppose some fundamental difference in the operation of the two plants, which would account for the loss on the part of the company which had decided advantages from the standpoint of operation. In searching for the fundamental difference which could reasonably be expected to account for this divergence in revenue, we find that a little over twenty years ago when Mr. Doherty invented the three-part rate, the electric industry immediately recognized the correctness of this manner of charging and adopted for its rate work the principal parts of the theory underlying this rate form. The electric companies' business has been built by a recognition of the necessity of fixing rates on a basis that took into consideration the demand and consumption costs as two separate factors which must be billed to the consumer proportionately to his demand and his consumption.

The gas companies from that time, twenty years ago to date, have adhered almost without exception to the old flat rate method of charging for their service. If the electric company in New York were to-day to take their total operating expenses plus their fixed charges and divide that cost of service by the number of kilowatt hours of output they would arrive at a flat consumption rate of about 4c per kilowatt hour. If they were to bill their service for the succeeding month on that basis, their output inside of six months would be cut in half. They would lose through this process a large majority of the good load factor business which they now have. After having lost this business they would have to establish a new rate, by again dividing their then existing operating charges plus their fixed charges by their then total output in kilowatt hours, which would give a rate at least of 7c. When they billed their customers at this rate they would lose the most desirable portion of their then remaining business. In other words, if the electric company were to do business under the same form of rate that the gas company has used in spite of continued agitation, their business would show the same sort of return that the gas company's business does at the present time.

Why have not the gas companies changed their rate schedules?

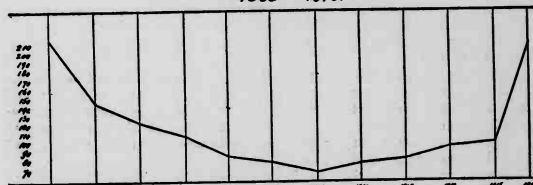
Simply because they lack moral courage to face the opposition with which the public meets every change in the form of rates or in the amount of rates.

The Doherty three-part rate is now as surely the solution of part of the troubles of the gas company as twenty years back it was the method by which the electric companies could be put on a profitable basis. All that it needs is the moral courage to attack the prejudice of courts, commissions and public against the establishment of a different form of rate. The theory was right then and is right now, and what is needed is the courage and persistency to put that form of rate into effect.

Referring back now to the attitude of the public utility commissions, the commissions were originally established for the purpose of cutting the then existing profitable rates for service, which rates had been established by franchises granted at the beginning of a period in the history of the utility business during which the cost of reproduction and the cost of operation went steadily down.

In the Smythe vs. Ames case, which was decided by the United States Supreme Court on March 7th, 1898, the city advocated and the company fought the establishment of cost of reproduction as the basis of a fair rate making value for the utility. I want to emphasize that the cost of reproduction was originally approved as the correct rate base in a decision by the Supreme Court of the United States on the application and argument of the city. At that time the cost of reproduction of any public utility was for two different reasons below the original cost of that utility: First, because as this chart

CHART No. 1
INDEX NUMBERS
1865 - 1919.



shows there had been a steady decline in commodity prices, and secondly because there had been a decrease in the cost of reproducing a plant of equivalent capacity, due to the increase in the efficiency of the units, even though the cost of the equivalent items had remained the same.

I have argued for several years, as you well know, for cost of reproduction as the correct economic basis on which to determine the value of anything with which we have to deal. Let us assume, however, that it is economically incorrect. It was established at the time by the cities to do away with then existing franchises which were profitable, and to cut the earnings of the public utility companies. The

cities adopted that basis of valuation because it at that time lent itself to the ends which they had in view; that is, the cutting of the utility rates. If they at that time took advantage of a principle which was fundamentally incorrect, there is every justice on our part at the present time in taking advantage of the same incorrect principle to make back those profits of which we were unjustly deprived, providing the principle was wrong. If, however, that principle is correct, the companies should take advantage of it, so that whether the principle is right or wrong, there is no reason why a single public utility operator should not devote his brains and energy to an endeavor to secure the rates which would be justified by adopting this basis of valuation.

Recall for a minute that Smythe vs. Ames case was decided in 1898 and that within the last month there have been decided the first two and only two cases by the Federal Courts in the United States which entitled the companies to a return on the basis of values current since 1917. These two cases are the Galveston and St. Joseph rate cases.

By referring to this chart No. 1 you will note from 1896 to date there has been a continual increase in the cost of commodities, so that at least from 1906 to date it could be reasonably assumed that the cost of reproduction exceeded the original cost of any particular utility. The cities established a principle which for the last fourteen years has been favorable to the utilities and yet for thirteen years and eleven months, no advantage has been taken of this principle, established by the cities, to get an adequate revenue for the public utilities, and why? For no other reason that I can conceive except that the public utilities lack the nerve to fight for those things to which they are justly entitled.

Go back a minute to the association which I assume would represent the steel companies providing those steel companies equaled in number and in total investment the public utilities. Do you think that the steel men would for fourteen years neglect an opportunity to get for their companies decisions which would allow these companies to earn a fair return on their property valued at twice what the public now wants to allow?

The public utilities do not maintain associations of sufficient financial resources or capacity to adequately represent the interest of the tremendous sums that are invested in the business, or the association would not have left to an individual the establishment of such a principle as this after fourteen years during which it would have been beneficial to the industry as a whole.

Forgetting the associations, I contend that out of over 12,000 plants there ought to have been at least one single exception which would have fought to a finish for the application of cost of reproduction to public utility rate making as a precedent by which others might be guided.

Another item—Do you realize the electric, gas and street railway companies of this country annually lose at least \$150,000,000, because they have not fought hard enough to get courts or commissions to figure correctly a simple example in arithmetic that I am sure any high school student would grasp? It sounds impossible, does it not? I will prove it.

Decisions rendered by practically all courts and commissions deduct from the cost new of the property used in service of the public, the

depreciation estimated to have accrued at the date of inventory and on an average the deduction amounts to 20% of that cost new. The 80% left becomes the rate base on which you are allowed depreciation and return. Then they adopt an average life for the property which we will say is twenty-five years and determine that each year you should be allowed to earn for depreciation one-twenty-fifth or 4% for depreciation reserve.

Four per cent. of the cost of that item—Oh! no, four per cent. of eighty per cent. of what it cost. In other words, 4% of their determination of present value.

The figures may make my statement clear.

TABLE NO. 1

Cost new	\$100.00
Accrued depreciation	20.00
Present Value or Rate Base	\$ 80.00
Assumed life of new property	25 years
Allowance for depreciation reserve ..	4%

If the life of this property when new is only twenty-five years, we obviously should get one-twenty-fifth or \$4.00 each year to have the investment repaid during its actual life. What we are allowed is 4% of \$80.00, or \$3.20 annually, which is 80c or 1% of the present value less than we are entitled to. It is not so much on a \$100.00 investment but on the fifteen billion dollars invested in electric, gas and street railway properties it amounts to \$150,000,000. per year.

TABLE NO. 2

4% SINKING FUND METHOD

End of Year	Reproduction Cost New	Depreciation Allowance	Accumulated Reserve Plus Interest	8% Return on Total Cost
1	\$ 100.00	\$ 2.40	\$ 2.40	\$ 8.00
2	100.00	2.40	4.90	8.00
3	100.00	2.41	7.51	8.00
4	100.00	2.40	10.21	8.00
5	100.00	2.40	13.02	8.00
6	100.00	2.40	15.94	8.00
7	100.00	2.40	18.98	8.00
8	100.00	2.41	22.15	8.00
9	100.00	2.40	25.43	8.00
10	100.00	2.40	28.85	8.00
11	100.00	2.40	32.40	8.00
12	100.00	2.40	36.09	8.00
13	100.00	2.41	39.94	8.00
14	100.00	2.40	43.94	8.00
15	100.00	2.40	48.10	8.00
16	100.00	2.40	52.42	8.00
17	100.00	2.40	56.91	8.00
18	100.00	2.41	61.59	8.00
19	100.00	2.40	66.45	8.00
20	100.00	2.40	71.51	8.00
21	100.00	2.40	76.77	8.00
22	100.00	2.40	82.24	8.00
23	100.00	2.41	87.94	8.00
24	100.00	2.40	93.85	8.00
25	100.00	2.40	100.00	8.00
		\$ 60.05		\$ 200.00

Note:—Under the 4% Sinking Fund, and on the basis of 25 year life, the annual contribution to the Fund must be 2.402% of the Reproduction Cost New in order that the entire amount of \$100.00 may be recovered at the end of the 25 years.

At the same time, it is assumed that the 8% return will be based in each year on \$100.00 and thus provide a return of \$200.00 over the 25 years, to which the investor is justly entitled.

On this table No. 2 which represents a proper application of the 4% sinking fund method of making depreciation reserves, we have a computation which were it followed by the public utility commissions would allow us to have our property returned during its wearing life and would allow us a fair return on the value of that property during the time it is devoted to the service of the public.

Column 3 on this table shows an allowance of \$2.40 per annum on each \$100.00 of investment, which when placed in a sinking fund bearing interest at 4% compounded annually amounts in 25 years to \$100.00, as shown in column 4, thus returning to the investor at the end of the actual life of the property the full amount of the investment.

Since the investor is denied the use of the money which goes into the sinking fund, or in other words, since he is charged interest on that amount of money providing he does use it, he is, therefore, entitled throughout the period of the life of this item of property to an 8% return on the full value of that property, or 8% each year on \$100.00, as shown by column 5.

The result of a rate determined by this method would be exactly identical from the earning standpoint to loaning money on a bond for 25 years. The public, which has the use of the property during the life of this loan, would each year pay 8% on that loan and at the same time would begin to set up a reserve which when interest had been accumulated to it, would amount to a sufficient total at the end of the period to repay the loan. The investor would, during the 25 years, receive \$200.00 in the form of interest and would at the end of 25 years have returned to him his original investment. This method has been approved as the proper method of rate determination in only three decisions by a public utility commission, and even in those decisions while the commission stated that this was a proper method of rate determination they did not use it after having expressed their approval.

In all other decisions the determination is made as shown on the next two tables.

TABLE NO. 3

DEPRECIATION ALLOWANCE COMPUTED EACH YEAR ON
100% OF INVESTMENT BUT FUND MAINTAINED INTACT
AND RETURN ALLOWED ON THE DEPRECIATED VALUE

End of Year	Present Value	Accumulation in Reserve	Accumulated Reserve with 4% Compound Interest	Return at 8% of the Present Value
1	\$ 100.00			
2	96.00	\$ 4.00	\$ 4.00	\$ 8.00
3	92.00	8.00	8.16	7.68
4	88.00	12.00	12.49	7.36
5	84.00	16.00	16.99	7.04
6	80.00	20.00	21.67	6.72
7	76.00	24.00	26.54	6.40
8	72.00	28.00	31.60	6.08
9	68.00	32.00	36.86	5.76
10	64.00	36.00	42.33	5.44
11	60.00	40.00	48.02	5.12
12	56.00	44.00	53.94	4.80
13	52.00	48.00	60.10	4.48
14	48.00	52.00	66.50	4.16
15	44.00	56.00	73.16	3.84
16	40.00	60.00	80.09	3.52
17	36.00	64.00	87.29	3.20
18	32.00	68.00	94.78	2.88
19	28.00	72.00	102.57	2.56
20	24.00	76.00	111.67	2.24
21	20.00	80.00	120.14	1.92
22	16.00	84.00	129.05	1.60
23	12.00	88.00	138.21	1.28
24	8.00	92.00	147.74	.96
25	4.00	96.00	157.65	.64
25	0	100.00	167.96	.32
				\$ 104.00

With depreciation allowance based on the original cost and with the allowance accruing in a fund at interest at 4% compounded annually, the fund finally returns to the investor 167.96% of the original investment.

With no price change \$67.96 of the amount can be credited as earnings, \$67.96 plus the \$104.00 allowed as earnings makes a total \$171.96.

The company is entitled to \$8.00 per year for 25 years during which the investor is deprived of his original investment and is entitled to have his investment returned at the end of the period. This would necessitate a total of \$300.00 while he actually receives \$104.00 as earnings and \$167.96 at the end of the period from the fund, which totals \$271.96 or \$28.04 less than the decisions presume to allow.

He therefore has had \$28.04 of his original investment confiscated.

On the assumption of a life of 25 years there is deducted for each year of the expired life \$4.00 for each \$100.00 of investment and the result obtained represents what the commission calls the present value of the property, which for varying years is shown in column 2. As I previously stated, the average determination of the present value of a composite property approximates 80% of the cost new. This is because public utility properties are constantly growing and because the present value represents the average condition of all items of varying life and different dates of installation.

In column 3, I have assumed that the commission allows you, if you can, to each year earn the \$4.00 which they deducted in determining their present value. At the end of 25 years you would have accumulated in your fund, without interest, \$100.00. Four per cent. is about the maximum that you can earn on a sinking fund and in column 4, I have computed 4% interest, compounded annually, and added it to column 3, so that at the end of the life of the property there would be accumulated in the fund \$167.96. Since the original cost was only \$100.00, the \$67.96 of this amount would be applicable to return. The commission then after having determined present value allows you as return 8% on that present value, which 8% I have computed for each of the 25 years and shown in the last column of the table. The total of the earnings so allowed on this particular item would amount to \$104.00 through the 25 years and when you have added the \$67.96 of surplus in the reserve for depreciation you have \$171.96 for earnings throughout the 25 year period during which you are deprived of your \$100.00 investment, or an average of \$6.88 per year. This method is the nearest approach to fairness which any commission has up to date adopted, and you will see while it ostensibly allows 8% it in fact annually allows 6.88%. There are not more than five or six cases of which I have knowledge to which even this approach to fairness has been shown.

The second of the two methods most generally used is shown in table No. 4.

TABLE NO. 4
BOTH DEPRECIATION ALLOWANCE AND RETURN COMPUTED
ON DEPRECIATED VALUE AND THE FUND
MAINTAINED INTACT

End of Year	Present Value	4% Depreciation Allowance	Accumulated Reserve 4% Compound Interest	8% Return on Present Value
	\$ 100.00			
1	96.00	\$ 4.00	\$ 4.00	\$ 8.00
2	92.16	3.84	8.00	7.68
3	88.47	3.69	12.01	7.38
4	84.93	3.54	16.03	7.08
5	81.53	3.40	20.07	6.80
6	78.27	3.26	24.13	6.52
7	75.14	3.13	28.23	6.26
8	72.13	3.01	32.37	6.02
9	69.24	2.89	36.55	5.78
10	66.47	2.77	40.78	5.54
11	63.81	2.66	45.07	5.32
12	61.26	2.55	49.43	5.10
13	58.81	2.45	53.85	4.90
14	56.46	2.35	58.35	4.70
15	54.20	2.26	62.94	4.52
16	52.03	2.17	67.63	4.36
17	49.95	2.08	72.42	4.16
18	47.95	2.00	77.32	4.00
19	46.03	1.92	82.33	3.84
20	44.19	1.84	87.46	3.68
21	42.42	1.77	92.73	3.54
22	40.72	1.70	98.14	3.40
23	39.09	1.63	103.70	3.26
24	37.53	1.56	109.41	3.12
25	36.03	1.50	115.29	3.00

\$ 127.94

From the depreciation allowance put out at compound interest there has accumulated an amount of \$15.29 in excess of the cost of replacing the property providing prices have remained stationary.

Assuming 8% is considered a fair return and the depreciated value is a proper rate base, the earnings would have amounted through the allowance of the 8% to a total in the 25 years of \$127.94. To this amount there may properly be added the excess in the depreciation reserve of \$15.29, making \$143.23, or an annual average of \$5.73 per year.

Since the investor at all times during this 25 years has been deprived of the use of the original \$100.00 invested, he has in reality received an average return of 5.73% under a decision supposedly yielding 8%.

During the 25 years the investor is deprived of the \$100.00 he should get earnings sufficient to return that amount and an annual earning of \$8.00 per year. This would total \$300.00.

He does get \$115.29 from the reserve and \$127.94 as earnings, or a total of \$243.23 which is \$56.77 below what he is entitled to.

With the same assumed life and the same \$100.00 value, the commission makes a deduction for accrued depreciation and shows the present value as in column 2. The 4% annual allowance instead of being computed on the original cost of the property is computed on the present value they find and would amount, if you had had a rate adjustment each year, to items shown in column 3. Column 4 indicates the amount which would accumulate at 4% interest compounded annually and shows \$115.29. Of this amount \$15.29 could be credited to earnings as the reserve is in excess of the original investment. The last column shows the amount of return which you would receive, being 8% of the present value found by the commission and shown in Column 2. Adding to the total of this column of \$127.94 the \$15.29 from the depreciation reserve you have a total for earnings of \$143.23, or an average annual allowance of \$5.73, or 5.73%, which you actually get under a decision that ostensibly allows you an 8% return.

To put it in another way, you have devoted to the public use for 25 years \$100.00 of investment. Ostensibly you receive on that investment \$8.00 per year in form of return throughout the period and at the end of that period you should get your original investment or a total of \$300.00 in all. You actually do get \$115.29 from the depreciation reserve and \$127.94, or a total of \$243.23 as against the \$300.00 which you are obviously entitled to receive.

You do not suppose that the fallacy of this could not be explained to a Federal Court or the United States Supreme Court, do you? But no one has ever appealed from the decision of the commission on this particular point.

Of all the local attorneys who handle our rate cases, to whom I have attempted to demonstrate this, I have never seen one who would use a pencil for fifteen minutes and get the error clearly through his head. On \$100.00 it is not a serious matter, but in Galveston, for instance, it would have made a difference in our return, if we could have secured it, of \$11,143.20 annually, or the equivalent when capitalized at 8% of an addition to our valuation of a plant as small as Galveston of \$139,000.00.

I may be unduly harping on these phases of the public utility business, but as I said before when practically one hundred per cent. of 12,000 plants, involving an investment of fifteen billion dollars, supplying a necessity of life, fail to earn a fair return, I do not believe you can look outside of that particular business for the reasons for its failure. We have lacked nerve.

At the American Gas Association meeting which was held here last week, Mr. Hancock of the Doherty Organization presented a most admirable and interesting paper. There was just one thing wrong about the paper. It was an entirely new line of thought for the Gas Association. It involved the saving of thousands of dollars in operation for every company, the officers of which would carefully consider it. After that paper had been read, it was dismissed with practically no discussion. I assume that was due to the fact that exactly as the gas companies of this country lacked the moral courage to adopt any part of the three-part rate, they lacked the courage to face this new idea.

To summarize, the newspapers attack the public utility operators in their attempts to secure an adequate revenue because it is perfectly

safe to do so, exactly as a bully might slap a cripple and would refrain from interfering with the progress of Jack Dempsey. The public utility operators have not fought back.

The local regulatory bodies give a disproportionate amount of weight to the desires of the customers of a public utility because the customers far outnumber the owners and operators of the utility companies, and because the operators of the utility company do not make up in aggressiveness what they lack in numbers. The public utility commissions use a brand of arithmetic that would not be used by a school boy in determining a depreciation allowance, and while it is a universal practice there has never been to my knowledge a case appealed from their decision by an association as a test case, nor has any utility, either large or small, made an appeal on this point to protect their own interests. We have not been fighters enough to get a court decision on an easily demonstrable example in simple arithmetic.

The decision based on the cost of reproduction was established and used by the cities during that period when that basis of valuation suited their aims and has been neglected for fourteen years by the public utility operators, certainly not because that basis would not yield more revenue, and for no other reason that I can see except a lack of nerve on the part of the operators to fight for those things which they must know they were justly entitled to receive.

The whole utility business representing fifteen billion dollars of investment fails in that every dollar invested in a legitimate business in providing a necessity of life is entitled to a fair return. Why, because we have not the moral courage to admit that in the control of a legitimate business we are not earning a legitimate profit and that our failure to earn a legitimate profit lies in our failure to fight for the equal justice that in all real contests is meted out to all business under the Constitution of the United States.

Very naturally in the consideration of this question my first inclination was to look for the mote in the other fellow's eye, but while writing this paper I have reviewed in my mind the history of the rate cases which I have had for this Company within the past three years and I awoke to the realization that in the majority of those cases we have been granted rates for which we asked.

In thinking about it, it became obvious the courts and commissions are naturally inclined to give us something less than a fair return and it, therefore, must follow that when we win the majority of cases we have not asked for what approximated a fair return or the decision would not have been granted to us. I, for one, am going to reform and file at least one rate that will ask for enough so that no court or commission will grant the full amount of the request. As is usual, I find reform should start at home.

Smythe vs. Ames, 169 U. S., 466
San Diego, etc. Co. vs. Jasper, 189 U. S., 439
Stanislaus Co. vs. San Joaquin Co., 192 U.S., 201
City of Knoxville vs. Knoxville Water Co., 212 U. S., 1.
Willcox vs. Consolidated Gas Co., 212 U. S., 19, reported Consolidated Gas Co. vs. City of New York, 157 Federal, 849.

Des Moines Gas Co. vs. Des Moines, 238 U. S., 153.
Denver vs. Denver Union Water Co., 246 U. S., 178
Minnesota Rate Cases, 230 U. S., 350.
United States ex rel Kansas City Southern Railroad Co. vs. Interstate Commerce Commission, U. S. Supreme Court 64 L.Ed., 367.
Minnesota Rate Cases, 184 Federal, 765.
Louisville & Nashville Railroad Co. vs. Railroad Commission 196 Federal, 800.
Ames vs. Union Pacific Railroad Co., 64 Federal, 165
Joplin & Pittsburg Railway Co. vs. Public Service Commission of Missouri, before Central Division of Western District of Missouri.
Lincoln Gas & Electric Light Co. vs. City of Lincoln, 250 U. S., 256.
Public Utilities Commission of Illinois ex rel City of Springfield vs. Springfield Gas & Electric Co., Docket No. 13048, 125 N. E., 891.
Clarence O. Hurst vs. Chicago, Burlington & Quincy Railroad Co., Docket No. 20454
Detroit vs. Michigan Railroad Commission, 177 Northwest 306
St. Joseph Railway, Light, Heat & Power Co. vs. Public Service Commission of the State of Missouri, Central Division of the Western District of Missouri—268 Fed., 267
Elizabethtown Gas Light Company vs. Board of Utility Commissioners of New Jersey, P. U. R. 1920F, 1001.
Consolidated Gas Company vs. Charles D. Newton as General of the State of New York, et al., 267 Fed. 231.
Southwestern Tel. & Tel. Co. vs. City of Fort Worth, Northwestern District of Texas, Fort Worth Division.

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